

Rec'd PCT/PTO 15 APR 2005

10/531473

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
29 April 2004 (29.04.2004)

PCT

(10) International Publication Number  
WO 2004/035675 A1

(51) International Patent Classification<sup>7</sup>: C08K 5/5419,  
C08G 59/40, C09D 163/00

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(21) International Application Number:  
PCT/NO2003/000342

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(22) International Filing Date: 16 October 2003 (16.10.2003)

(25) Filing Language: Norwegian

(26) Publication Language: English

(30) Priority Data:  
20024990 16 October 2002 (16.10.2002) NO

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HK, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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Published:

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: EPOXY RESIN CURING AGENT FOR ENHANCED WEAR RESISTANCE AND WEATHERABILITY OF CURED MATERIALS

(57) Abstract: Hardener for curing of epoxy resins which produces materials with high abrasion resistance, photostability and chemical resistance. The hardener comprises a sol prepared by controlled hydrolysis and condensation of compounds of the type:  $(X-B)_n Si(-Y)_{4-n}$  where  $n = 1$  or  $2$ ,  $X = SH, -N=C=O$ , or  $NR_1R_2$ ,  $R_1, R_2$  being chosen from hydrogen, saturated or unsaturated  $C_1$ - $C_{18}$ -alkyl, substituted or non-substituted aryl, formyl, aliphatic or aromatic carbonyl, carbamoyl, sulphonyl, sulphoxyl, phosphonyl, sulphinyl, phosphinyl, while the carbon chains of said compounds may include one or more of the elements oxygen, nitrogen, sulphur, phosphorus, silicon and boron, and/or may include one or more hydrolysable silane units, or  $R_1, R_2$  are chosen from condensation products or addition products of one or more types or chemical compounds such as acids, alcohols, phenols, amines, aldehydes or epoxides.  $B$  is a spacing group chosen from saturated or unsaturated  $C_1$ - $C_{18}$ -alkylene, substituted or nonsubstituted arylene, while the carbon chains of the stated compounds may optionally include one or more of the elements oxygen, nitrogen, sulphur, phosphorus, silicon and boron.  $Y$  is chosen from hydrolysable groups such as alkoxy, carboxyl, and halogen.

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